

EVOLUTION AND THE DIVERSITY OF LIFE, SELECTED ESSAYS

by Ernst Mayr, 1976. The Belknap Press of Harvard University Press, (Cambridge, Massachusetts 02138) 720 p. \$20.

This book comprises a distillation of the research and writings of Ernst Mayr, one of the great men of evolutionary biology. The essays are grouped into nine broad areas: evolution, speciation, history of biology, philosophy of biology, theory of systematics, species, man, biogeography and behavior. Mayr has written an explanatory introduction to each section, and many of the essays include summary conclusions. All the essays have extensive references listed.

A theme that is emphasized throughout is that though evolution has been studied for many years, and scientists now place great emphasis on molecular biology, there are many problems still to be solved in evolution, making its study a wide open frontier for the present day investigator.

The title indicates the importance that Mayr places upon diversity. He says, "By stressing the importance of the individual, by developing and applying population thinking, by giving us a reverence for the diversity of nature, systematic and evolutionary biology have supplied a dimension to human conceptualization that had been largely ignored, if not denied, by the physical sciences. And yet it is a component that is crucial for the well-being of human society and for any planning of the future of mankind."

This book is a valuable reference for any biologist and is essential for a complete biology library. It could be the source of countless ideas for the fledgling investigator. It might also be used as a text for an advanced course in evolution, or as an information source for a seminar.

Margaret L. Watson
Simpson College
Indianola, Iowa

THE PROFESSOR, THE INSTITUTE AND DNA

by Rene J. Dubos. 1976. The Rockefeller University Press (Box 291, New York 10021). 238 p. \$14.50.

The achievements of Oswald T. Avery and the Rockefeller Institute for Medical Research are traced as the "two heroes" in this highly personalized and well-written biography. Avery, the senior author of a scientific paper in 1944 that identified DNA as the source of genetic information, was also a monumental force in the development of medical

UNDERSEA ENVIRONMENTAL FILMS

16 mm, color and optical sound

CLOUD OVER THE CORAL REEF

"... one of the most visually striking efforts of documenting the decline and fall of an ecosystem that students are likely to experience"—*The Science Teacher*. 27 min. Price \$350

THE POISONED SEA

Shows the effects of sewage pollution in coastal waters. "Well suited for an introduction to water pollution . . . sewage treatment . . . oceanography, ecology, or conservation."—*The Science Teacher*. 27 min. Price \$350

Purchase, rental or preview from

MOONLIGHT PRODUCTIONS/Dr. Lee Tepley

2650 California Street, Dept. BT
Mountain View, California 94040

research efforts in the United States. Professor Dubos presents a detailed analysis and account of Avery's scientific contributions and long association with the Rockefeller Institute. Dr. Dubos accurately describes Avery's notable accomplishments along with the difficulties, pitfalls and disappointments that often accompanied them. Throughout the book Dr. Dubos presents a living portrait of Oswald T. Avery, the scientist and the man. Dr. Dubos's long association with Avery contributes greatly to understanding the character of a man whose forceful personality had lasting influence on his colleagues and the science of biology. Dubos is himself a world-renowned microbiologist. His expertise and close association with Avery is very apparent throughout the book. He does an outstanding job of describing the laborious and often tedious methods used by Avery and his colleagues that led to the discovery of the genetic import of DNA.

An assortment of photos from various aspects of Avery's scientific career is included in the middle section of the book. Chapters cover the rise of the Rockefeller Institute, chemistry in medical research, Avery's personal life, Avery's life in the laboratory, the lure of antiblastic immunity, the chemical basis of biological specificity, the complexities of virulence, bacterial variability, heredity and DNA, and personal recollections by the author. The book has a complete list

of references included for each chapter and a chronology of the principal events and publications in the life of Oswald T. Avery from 1877 to 1955.

The book is an excellent reference for any secondary school or college library. For the secondary school instructor and his student, this book is an excellent source of background information in the history, methods, and publications in DNA research. The advanced undergraduate or beginning graduate student should find the book useful and enjoyable as supplementary reading material in genetics courses. This book I highly recommend for reading by practicing biologists in every field.

Virgil A. Sestini
Bonanza High School
Las Vegas, Nevada

Oceanography

ELEMENTS OF OCEANOGRAPHY

by J. Michael McCormick and John V. Thiruvathukal. 1976. W.B. Saunders Company, (West Washington Square, Philadelphia 19105). 346 p. \$14.50. Instructor's manual available.

Investigation of the oceans—man's last geographic frontier—offers tremendous potential but carries with it awesome responsibility. As we prepare to utilize the vast natural resources of the oceans, we are challenged to preserve the beauty and functional integrity of this great environment. Our success in balancing gains against inevitable losses will ultimately depend on the efforts of an informed citizenry to influence industry and government leaders about critical decisions affecting the marine realm. The authors convey this message in their book, which is written to meet the needs of the general public. They present the essential scientific information in readable fashion, supplementing this with special discussions of mariculture, desalination, and the political implications of technical developments.

The book is designed for a one-term college course, but it would also be suitable for an advanced high school or continuing education course. The scientific content encompasses four disciplines—geology, physics, chemistry, and biology—and there are additional chapters on the history of oceanography and political oceanography. Despite the broad coverage, subject continuity is good throughout. The chapter on the geology of ocean basins presents the broad sweep of marine geology and contains up-to-date information about sea floor spreading and plate tectonics.